Statistical Bulletin
METROPOLITAN LIFE INSURANCE COMPANY
Volume 42 November 1961

Population Profile of Our Largest Cities

THE Census of 1960 showed that the population of the five largest cities in the United States totaled about 17½ million. This was nearly one tenth of the entire population in the country and exceeded the total number of residents in 20 of our less populous States. New York City alone had approximately 7¾ million inhabitants, or almost as many as the combined total for the next three cities in order of size — Chicago, Los Angeles, and Philadelphia. Detroit, ranking fifth, was the only other city in the United States with a population exceeding one million.

Four out of the five largest cities — all but Los Angeles — experienced decreases in population between 1950 and 1960, but in no case did the number fall to the 1940 level; the table on page 2 gives the details. New York recorded the smallest relative decrease in the past decade — 1.4 percent; even so, the population loss amounted to 110,000. The largest decrease, both absolute and relative, occurred in Detroit, the population in that city falling by 180,000, or 9.7 percent. In sharp contrast, Los Angeles gained more than half a million people, an increase of 26 percent in the decade. Los Angeles ranked third in 1960 with a population of about 2½ million, having advanced from fourth place in 1950 and from fifth in 1940.

The ratio of males to females in the five largest cities decreased during the past two decades. In Detroit, which experienced the largest reduction, males outnumbered females in 1940; a decade later the sexes were about evenly balanced; and in 1960 males were in the minority, comprising 48.8 percent of the city's population. In New York City, males as a proportion of the total population fell from 49.3 percent in 1940 to 47.8 in 1960, lower than in any of the other four cities. The 1940-60 decrease was smaller in Chicago, Philadelphia, and Los Angeles.

The nonwhite population has been increasing rapidly in all five cities. In Detroit, the nonwhite population rose from about 9 percent of the total in 1940 to 29 percent in 1960. In Chicago the corresponding increase was from 8 to

nearly 24 percent of the total, and in New York from 6 to 15 percent. The growing nonwhite proportion in New York does not reflect to any appreciable extent the sharp increase in the Puerto Rican population, the preponderant majority of which is classified as white. The Puerto Rican population in the city accounted for about one twelfth of the total in 1960.

It is apparent from the table that in the past decade, each city except Los Angeles lost many more white people through migration—largely to the suburbs—than it gained through the excess of births over deaths. In New York the loss

POPULATION OF THE FIVE LARGEST CITIES IN THE UNITED STATES
(Numbers in Thousands)

Characteristic	New York	Chicago	Los Angeles	Philadelphia	Detroit
Total population					
1940	7,455	3,397	1,504	1,931	1,623
1950	7,892	3,621	1,970	2,072	1,850
1960	7,782	3,550	2,479	2,003	1,670
Percent male					
1940	49.3	49.5	48.8	48.8	51.0
1950	48.4	49.1	47.9	48.4	50.1
1960	47.8	48.6	48.3	48.0	48.8
Percent white					
1940	93.6	91.7	93.5	86.9	90.7
1950	90.2	85.9	89.3	81.7	83.6
1960	85.3	76.4	83.2	73.3	70.8
1950-60					
Natural increase	713	454	261	212	280
White	519	279	189	119	179
Nonwhite	194	175	72	93	101
Net total migration*	−822	−525	248	−281	−460
White	−994	−678	114	−344	−542
Nonwhite	172	153	134	63	82
Age in 1960—percent	100.0	100.0	100.0	100.0	100.0
Under 14 years	22.6	25.9	25.5	25.2	27.0
14-17	5.2	5.2	5.1	5.6	5.7
18-24	8.5	8.7	8.1	8.7	7.8
25-64	53.2	50.4	51.1	50.1	50.0
65 and over	10.5	9.8	10.2	10.4	9.5
Marital status in 1960					
Ages 14 and over—percent	100.0	100.0	100.0	100.0	100.0
Single	25.2	24.0	21.7	25.6	22.6
Married	63.4	63.1	63.1	62.3	64.9
Widowed	9.6	9.5	9.2	10.1	8.7
Divorced	1.8	3.4	6.0	2.0	3.8

*Comprises net in-migrants from outside the city, and movement of persons in the Armed Forces. Minus sign (−) denotes loss.

Source: Computed by the Statistical Bureau of the Metropolitan Life Insurance Company from data published by the Bureau of the Census and the National Vital Statistics Division of the National Center for Health Statistics.

of white population through migration exceeded by about 475,000 the gain through natural increase. The over-all loss in the white population of Chicago was close to 400,000; in Detroit it was about 363,000 and in Philadelphia 225,000. By contrast, the nonwhite population in these four cities grew by both migration and natural increase. In Los Angeles, the white and nonwhite populations were augmented by migration and by natural increase.

The major cities differ somewhat in the age profile of their current population. New York and Detroit show the widest disparity in this respect. In the former, slightly less than 23 percent of the population is under age 14 while in Detroit the proportion is 27 percent. On the other hand, New York has the largest proportion at the older ages — 10.5 percent at 65 years and over; Detroit has the lowest proportion, 9.5 percent.

The cities likewise vary in the composition of their population according to marital status. Philadelphia has the highest proportion widowed—10.1 percent of the total population; Detroit, at the other end, has 8.7 percent. The disparity for the divorced is more marked, ranging from 1.8 percent of the population in New York to 6.0 percent in Los Angeles.

Illness and Deaths from Chronic Respiratory Diseases*

INTEREST in the chronic disorders of the respiratory system has been increasing for various reasons. First, these diseases are very common in the United States, even if cases of malignant or tuberculous origin are omitted from consideration. Furthermore, there has been a rapid rise in the number of older people in the population, who suffer the greatest amount of disability and the highest mortality rates from the chronic respiratory diseases — and the outlook is that this trend will continue. Then, too, greater attention is being focused on the effect of air pollution on health and, more specifically, on respiratory disorders.

The latest nationwide statistics on illness from several chronic respiratory conditions are provided by the National Health Survey from information collected in household interviews during July 1957-June 1958. This type of information is subject to several sources of error, and the validity of the data depends upon the accuracy of information that the respondent has and reports to the survey interviewer. Moreover, the chronic respiratory diseases are often interrelated, and physicians may differ with respect to the diagnostic category to which individual cases are assigned. Despite these limitations of the data, they indicate the scope of the chronic

*The trend of mortality from these diseases will be discussed in the next issue of the Statistical Bulletin.

respiratory disease problem.

On the basis of the civilian noninstitutional population interviewed, it was estimated that there were nearly 4,000,000 persons with asthma in the United States in 1958, or 23.4 per 1,000 population. The number with chronic bronchitis was estimated to be 2,127,000, or 12.6 per 1,000 population. It is important to note, however, that these figures are not mutually exclusive; persons who reported having both asthma and bronchitis would be included in the totals for each of these categories. More detailed information available for chronic bronchitis shows that the illness rate from the condition rises steadily during adult life.

The major chronic respiratory diseases listed in Table 1 were reported to have caused nearly 23,000 deaths in the United States during 1959. This total is about two thirds the number of deaths attributed to lung cancer and more than twice the number due to respiratory tuberculosis. Among white males, the mortality from emphysema without mention of bronchitis exceeded by a considerable margin that from asthma or any of the other disorders listed in the table; among nonwhite males, the death rates from emphysema and asthma were of equal magnitude. Among females, both white and nonwhite, asthma outranked the other major chronic respiratory diseases as a cause of death.

Each of the diseases shown in Table 1 exacts a considerably

TABLE 1—MORTALITY FROM SPECIFIED CHRONIC RESPIRATORY DISEASES
By Color and Sex. United States, 1959

Disease	Death Rates Per 100,000				
	Total Persons	White		Nonwhite	
		Males	Females	Males	Females
Total	12.9	21.0	5.7	13.6	7.1
Asthma	2.8	3.8	1.8	3.7	3.0
Bronchitis*	1.5	2.4	0.8	1.6	0.9
Pneumoconiosis and other occupational lung diseases	0.9	1.9	‡	0.7	0
Other chronic interstitial pneumonia	2.0	2.8	1.2	3.0	2.2
Bronchiectasis	1.3	1.8	0.9	0.9	0.3
Emphysema†	4.4	8.4	1.0	3.7	0.7

*Chronic and unqualified; includes cases with emphysema.
†Without mention of bronchitis.
‡Less than 0.05.
Source of data: National Vital Statistics Division, National Center for Health Statistics.

TABLE 2—MORTALITY FROM SELECTED CHRONIC RESPIRATORY DISEASES
White Persons by Sex and Age. United States, 1958-59

Age Period (Years)	Average of Annual Death Rates Per 100,000					
	Asthma		Bronchitis*		Emphysema†	
	Males	Females	Males	Females	Males	Females
All Ages‡	3.9	1.8	2.3	0.8	7.9	1.0
35-44	1.0	1.2	0.3	0.1	0.9	0.3
45-54	3.9	2.4	1.3	0.4	5.3	0.9
55-64	11.9	3.7	5.7	0.8	25.7	1.8
65-74	23.0	6.5	13.7	2.2	55.4	4.8
75-84	29.9	9.8	18.8	6.9	62.1	8.3
85 and over	27.3	16.9	35.2	20.0	61.1	16.8

*Chronic and unqualified; includes cases with emphysema.
†Without mention of bronchitis.
‡Including ages under 35.
Source of basic data: Reports of the National Vital Statistics Division, National Center for Health Statistics.

higher death toll among males than among females. The disparity is greatest for the diseases of occupational origin (pneumoconiosis and other occupational lung diseases), the mortality from which is practically limited to males. For emphysema, the death rate among white males is about eight times that among white females, being 8.4 and 1.0 per 100,000, respectively, in 1959.

The death rates from asthma, bronchitis, and emphysema increase with advance in age; Table 2 shows the details for white males and females at ages 35 and over, where the mortality from these conditions is largely concentrated. The rise is more rapid for males than females during middle life, but the situation is reversed at the advanced ages. The large excess of the male over female death rates noted above extends to virtually all age groups. At ages 45 and over the death rates from emphysema among white males are considerably higher than those from the other two diseases, but among females the mortality rates from asthma outrank the others.

Considerable progress has been made in the control of some of the chronic respiratory conditions. In allergic disorders and in bronchitis, a degree of control is possible by prophylactic measures and by prompt treatment of acute respiratory infections. The major problem is the high proportion of cases in which chronic respiratory conditions are due to progressive deterioration of the lungs with advance in age. The problem in individual patients is often com-

plicated by the presence of heart disease, which may be associated with the respiratory disorder or be independent of it.

Hospital Utilization in an Industrial Area: Nonsurgical Cases*

THIS article deals with the claims for hospitalization of nonsurgical cases paid by the Metropolitan Life Insurance Company in March-August 1959 under Group Health insurance contracts held by six large corporations in the Pittsburgh area. The contracts covered both employees—mainly clerical and operative—and their dependents under several different benefit programs.

As Table 1 shows, only slightly more than half as many cases were hospitalized for nonsurgical as for surgical conditions, but the ratio varied with the status of the claimant. Among male employees, there were about seven nonsurgical for every 10 surgical cases; among females, both employees and dependents, the ratio was about one to two, while among dependent children there were only two nonsurgical for every five surgical cases.

The length of hospital stay, on the other hand, was greater for nonsurgical than for surgical cases, the averages being 11.2 days and 8.4 days, respectively, for the experience as a whole. The widest difference in hospital stay was recorded for dependent children, the average duration of hospitalization for nonsurgical cases—8.4 days—being more than twice that for surgical cases.

Table 2 shows the number of cases hospitalized for specified nonsurgical conditions and the average duration of hospitalization. Diseases of the digestive system accounted for nearly one fourth of the total. This category of disorders, in accordance with established statistical practice, includes diseases of the buccal cavity; the latter—very largely conditions of the teeth and supporting structures—comprised one in every four of the cases hospitalized for diseases of the digestive system. Ulcers, duodenal and gastric, were responsible for about one fifth of the cases in the digestive disease category, while gastro-enteritis and colitis, gastritis, and cholecystitis accounted for successively smaller proportions of the total.

The hospital stay for nonsurgical diseases of the digestive system as a group averaged 6.2 days per case; for buccal cavity disorders the stay was appreciably less than half that for the ulcer cases.

Diseases of the circulatory system comprised one sixth of the cases hospitalized for nonsurgical conditions; about 50 percent of these cases were attributed to arteriosclerotic heart disease speci-

*The hospitalization of surgical cases was discussed in the October issue.

fied as involving coronary artery disease. Hospitalization for the major circulatory diseases was relatively long—approximately 20 days per case for arteriosclerotic heart disease, for rheumatic fever, and for chronic rheumatic heart disease; for the circulatory diseases as a whole, the average period of hospitalization was 16.8 days. Among males in this study, arteriosclerotic heart disease specified as involving coronary artery disease accounted for 30 percent of the days spent in the hospital for all nonsurgical conditions combined.

The diseases of the respiratory system, with somewhat less than one tenth of the total cases, ranked third in numerical importance. Influenza and pneumonia, and acute upper respiratory infections accounted for the majority of patients in this category. Following the respiratory diseases in rank were accidents and other external causes; the broad class of allergic, endocrine, and metabolic diseases; mental disease and personality disorders; and diseases of the nervous system and the sense organs. The outstanding fact regarding the

TABLE 1—NUMBER OF CASES HOSPITALIZED AND LENGTH OF HOSPITAL STAY
By Status of Claimant. Experience of Six Large Corporations in the Pittsburgh Area Covered by Group Health Insurance in the Metropolitan Life Insurance Company March Through August 1959

Status of Claimant; Age and Sex	Number of Cases		Average Hospital Stay, in Days	
	Surgical	Nonsurgical	Surgical	Nonsurgical
All Cases	4,527	2,344	8.4	11.2
Employees				
Male—total*	1,196	854	11.9	12.1
Under age 24	19	16	6.1	6.2
24-39 years	303	193	8.1	8.8
40 and over	841	637	13.4	13.3
Female—total	177	92	8.7	9.8
Single	139	70	8.7	9.5
Married	38	22	8.9	10.7
Dependents				
Wives—total	1,499	758	10.1	12.8
Under age 24	50	28	4.8	8.4
24-39 years	576	224	7.5	12.1
40 and over	873	506	12.1	13.3
Children—total	1,655	640	4.1	8.4
Under age 6	606	321	4.1	7.5
6-14 years	852	230	3.8	7.4
15 and over	197	89	5.9	13.9

*Includes 33 dependent husbands of female employees as surgical cases and 8 as nonsurgical cases.

duration of hospitalization for this list of diseases is the extended stay for mental and nervous disorders, particularly among females. One sixth of all the days spent in the hospital by females in this study were for psychoneurotic disorders and psychoses.

Practically all the patients utilized hospital special services. About 95 percent used laboratory services, at least 85 percent re-

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TABLE 2—NUMBER OF CASES HOSPITALIZED FOR SPECIFIED NONSURGICAL CONDITIONS AND LENGTH OF HOSPITAL STAY

Experience of Six Large Corporations in the Pittsburgh Area
Covered by Group Health Insurance in the Metropolitan Life Insurance Company
March Through August 1959

Condition	Number of Cases	Average Hospital Stay, in Days
All Nonsurgical Cases	2,344	11.2
Diseases of digestive system—total	550	6.2
Diseases of buccal cavity*	141	3.3
Ulcers	115	7.7
Duodenum	85	7.7
Stomach	30	7.8
Gastro-enteritis and colitis†	66	5.0
Gastritis and duodenitis	43	5.5
Cholecystitis, without mention of calculi	27	7.7
Diseases of circulatory system—total	375	16.8
Arteriosclerotic heart disease, involving coronary arteries	185	20.6
Rheumatic fever	35	20.7
Chronic rheumatic heart disease	18	19.4
Diseases of respiratory system—total	208	9.0
Influenza and pneumonia	91	11.2
Acute upper respiratory infections	35	4.6
Bronchitis	24	6.7
Accidents; other violence—total	182	6.2
Head injury (excluding skull fracture)	61	4.2
Concussion	40	4.3
Dislocations, sprains, and strains	42	9.7
Allergic, endocrine, metabolic diseases—total	144	10.0
Diabetes mellitus	70	11.7
Asthma	30	8.3
Mental disease and personality disorders—total	128	29.4
Psychoneurotic disorders	62	24.0
Psychoses	50	40.5
Diseases of nervous system and sense organs—total	121	16.1
Vascular lesions affecting central nervous system	32	29.3
Diseases of ear and mastoid	22	7.0
Diseases of bones and organs of movement—total	117	11.4
Arthritis and rheumatism‡	64	10.1
Displacement of intervertebral disc	30	10.4
Diseases of genito-urinary system—total	107	8.1
Neoplasms—total	53	12.0
Malignant	32	12.9
Other and unspecified—total	359	9.8
Ill-defined conditions	93	9.9
Infectious and parasitic diseases	43	10.6
Diseases of skin and cellular tissue	39	7.7
Diseases of blood and blood-forming organs	25	14.1

*Includes diseases of teeth and supporting structures.
†Excluding newborn.
‡Except rheumatic fever.

ceived drugs, nearly 75 percent had diagnostic X-ray, while smaller numbers had electrocardiograms, oxygen, and other special services.

The Metropolitan Life Insurance Company presents the results of this study as a contribution to the growing body of information on medical care programs. It is hoped that the data will be useful to medical societies, hospitals, and other organizations concerned with the rapidly changing patterns in medical care practices. The study may also suggest leads for further research.

The Accidental Gas Poisoning Hazard

ACCIDENTAL poisoning by gases and vapors takes a toll of more than 1,100 lives a year in the United States, equivalent to a death rate of 0.6 per 100,000 population. Nearly three out of every four of the victims are males. A large part of the mortality from gas poisoning occurs in and about the home; among males the proportion exceeds three fifths and among females it is about four fifths of the total. Most of the fatalities outside the home have their origin in industrial places, in public buildings, on farms, and in parked vehicles on streets and highways.

Table 1 shows the variations by sex and age in the mortality from accidental gas poisoning in the general population of the United States. Among males, the death rate in 1959 increased from less than 1.0 per 100,000 at ages under 20 to 2.3 at ages 75 and over. Among females, the mortality rate from this cause did not exceed 0.5 per 100,000 for any age group under 65, and reached a maximum of 1.2 at ages 75 and over. For all ages combined, the death rate among males was about twice that for females, the rates being 0.9 and 0.4 per 100,000, respectively.

Facts on the recent trend of mortality from accidental gas poisoning, according to the type of gas or vapor involved, are shown in Table 2. The death rate from utility (illuminating) gas decreased appreciably between 1949 and 1959—from 0.8 to 0.3 per 100,000 among males and from 0.5

TABLE 1
MORTALITY FROM ACCIDENTAL POISONING BY GASES AND VAPORS
By Sex and Age. United States, 1959*

Age Period (Years)	Death Rate per 100,000	
	Males	Females
All Ages	0.9	0.4
Under 5	0.3	0.2
5-14	0.2	0.1
15-19	0.7	0.5
20-24	1.1	0.4
25-44	1.1	0.3
45-64	1.6	0.5
65-74	1.7	0.7
75 and over	2.3	1.2

*Includes Alaska but not Hawaii.
Source of basic data: National Vital Statistics Division, National Center for Health Statistics.

TABLE 2—MORTALITY FROM ACCIDENTAL POISONING BY TYPE OF GAS AND VAPOR
By Sex. United States, 1959* and 1949

Type of Gas	Number of Deaths, 1959			Death Rate per 100,000			
				Males		Females	
	Total	Males	Females	1959	1949	1959	1949
All Types	1,141	824	317	0.9	1.5	0.4	0.7
Utility (illuminating)	376	239	137	0.3	0.8	0.2	0.5
Motor vehicle exhaust	385	313	72	0.4	0.3	0.1	†
Other carbon monoxide	259	171	88	0.2	0.2	0.1	0.1
Other and unspecified	121	101	20	0.1	0.2	†	†

*Includes Alaska but not Hawaii.
†Less than 0.05.
Source of basic data: National Vital Statistics Division, National Center for Health Statistics.

to 0.2 among females. The relative frequency of fatal accidental poisoning by motor vehicle exhaust gas, on the other hand, increased slightly.

Currently, more males die from motor vehicle exhaust gas than from any other type of gas poisoning; utility gas takes the second highest toll. A decade earlier, less than half as many males were killed by motor exhaust as by utility gas. In both periods, the mortality from other types of carbon monoxide poisoning — very largely deaths resulting from the incomplete combustion of coal, oil, and other fuels — ranked third among males. Among females, deaths from utility gas continue to outnumber those from any other type of gas.

Gas poisoning takes its highest toll during the autumn and winter months. In most years, the mortality from this cause begins to rise sharply in October and reaches its peak in December or January. The increase in fatalities with the advent of colder weather results primarily from the greater use of heating facilities in the home. It reflects also the more frequent running of automobile motors in a closed garage, or in vehicles with closed windows parked on the street or highway.

A recent study of fatal home accidents among policyholders of the Metropolitan Life Insurance Company showed that a substantial proportion of the deaths from gas poisoning were caused by improperly installed or defective appliances being used in poorly ventilated rooms. The Public Health Service reports that faulty gas-burning appliances rank second only to motor vehicles as a source of carbon monoxide poisoning.

MORTALITY FROM SELECTED CAUSES

Industrial Policyholders, Metropolitan Life Insurance Company
October 1961

Cause of Death	Annual Rate per 100,000 Policyholders*				
	October		Year to Date		
	1961	1960	1961	1960	1959
All Causes	679.4	613.0	695.2	680.6	671.0
Tuberculosis (all forms)	5.1	3.8	5.4	5.6	5.8
Communicable diseases of childhood	0.1	—	0.1	0.1	0.1
Acute poliomyelitis	—	0.2	†	0.1	0.2
Malignant neoplasms	154.7	138.0	150.3	143.2	143.0
Digestive system	48.5	45.5	48.4	48.0	48.6
Respiratory system	25.3	19.6	24.1	21.6	21.5
Diabetes mellitus	14.3	14.0	15.6	15.6	15.0
Diseases of the cardiovascular-renal system	360.1	318.2	372.4	362.8	357.4
Vascular lesions, central nervous system	67.4	56.9	67.7	67.7	68.1
Diseases of heart	265.3	234.3	276.5	267.8	263.0
Chronic rheumatic heart disease	10.2	7.9	11.7	10.9	10.9
Arteriosclerotic and degenerative heart disease	214.7	189.1	223.6	215.0	209.0
Diseases of coronary arteries	125.4	109.8	130.3	126.1	124.9
Hypertension with heart disease	28.6	27.4	28.9	29.8	30.9
Other diseases of heart	11.8	9.9	12.4	12.2	12.3
Nephritis and nephrosis	5.9	6.1	6.6	6.9	7.3
Pneumonia and influenza	14.4	14.0	17.7	22.7	18.7
Complications of pregnancy, childbirth	0.4	0.5	0.6	0.6	0.8
Suicide	5.6	6.3	6.3	6.3	6.6
Homicide	3.2	2.9	3.0	2.9	2.8
Accidents—total	32.5	29.2	33.4	32.8	33.7
Motor vehicle	15.2	15.2	14.3	13.9	14.6
All other causes	89.0	85.9	90.4	87.9	86.9

*These death rates relate to persons insured under Weekly or Monthly premium-paying Industrial policies and Monthly premium-paying Ordinary policies for small amounts of insurance.
†Less than 0.05.
Note: Rates for 1960 and 1961 are provisional.

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MORTALITY FROM ALL CAUSES

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